Appin. No.: 09/803,779

Amendment Dated: November 12, 2003

Reply to Office Action of: August 14, 2003

<u>Amendments to the Claims:</u> This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) An expression converting method wherein for each sentence in a corpus, key words are selected from the sentence, a combination of key words that are in a co-occurrence relation is identified from among a predetermined number of combinations of key words among the selected key words, and the identified key word combination and an expression into which the sentence from which the key words are selected is converted are previously associated, and

wherein predetermined key words are selected from an input sentence, the selected key words are combined, the key word combinations and the previously identified key word combination of each sentence are compared, one or more than one sentences that coincide or have a high degree of similarity as a result of the comparison are selected, and expressions into which the selected sentences are converted are output-, and

the predetermined key words of each sentence in the corpus are stored,

from the stored predetermined key words of each sentence in the corpus, predetermined combinations of key words are selected as having a dependency relationship and stored, and

the predetermined combinations of key words are individually selected for each sentence from the stored predetermined key words of the sentence.

2. (Currently Amended) An expression converting method wherein by use of classing information in which key words are previously classed based on predetermined properties and each class is provided with a name, for each sentence in a corpus, key words are selected from the sentence, a combination of classes that are in a co-occurrence relation are identified from among a predetermined number of combinations of classes among classes to which the selected key words belong, and the identified class combination and an expression into which the sentence from which the key words are selected is converted are previously associated, and



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wherein predetermined key words are selected from an input sentence, classes to which the selected key words belong are combined, the class combinations and the previously identified class combination of each sentence are compared, one or more than one sentences that coincide or have a high degree of similarity as a result of the comparison are selected, and expressions into which the selected sentences are converted are output-, and

the predetermined key words of each sentence in the corpus are stored,

from the stored predetermined key words of each sentence in the corpus, predetermined class combinations of key words are selected as having a dependency relationship and stored, and

the predetermined class combinations of key words are individually selected for each sentence from the stored predetermined key words of the sentence.

3. (Currently Amended) An expression converting method wherein for each sentence in a corpus, key words are selected from the sentence, a combination of key words that are in a co-occurrence relation is identified from among a predetermined number of combinations of key words among the selected key words, and the identified key word combination and an expression into which the sentence from which the key words are selected is converted are previously associated,

wherein by use of classing information in which key words are previously classed based on predetermined properties and each class is provided with a name, the identified key word combination is associated with a class combination to thereby identify a class combination of the sentence, and

wherein predetermined key words are selected from an input sentence, classes to which the selected key words belong are combined, the class combinations and the previously identified class combination of each sentence are compared, one or more than one sentences that coincide or have a high degree of similarity as a result of the comparison are selected, and expressions into which the selected sentences are converted are output, and



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the predetermined key words of each sentence in the corpus are stored,

from the stored predetermined key words of each sentence in the corpus, predetermined combinations of key words are selected as having a dependency relationship and stored, and the predetermined combinations of key words are individually selected for each sentence from the stored predetermined key words of the sentence.

4. (Currently Amended) An expression converting apparatus comprising:

associating means of, for each sentence in a corpus, selecting key words from the sentence, identifying a combination of key words that are in a co-occurrence relation from among a predetermined number of combinations of key words among the selected key words, and previously associating the identified key word combination and an expression into which the sentence from which the key words are selected is converted; and

converting means of selecting predetermined key words from an input sentence, combining the selected key words, comparing the key word combinations and the previously identified key word combination of each sentence, selecting one or more than one sentences that coincide or have a high degree of similarity as a result of the comparison, and outputting expressions into which the selected sentences are converted, and

the predetermined key words of each sentence in the corpus are stored,

from the stored predetermined key words of each sentence in the corpus, predetermined combinations of key words are selected as having a dependency relationship and stored, and

the predetermined combinations of key words are individually selected for each sentence from the stored predetermined key words of the sentence.

5. (Currently Amended) An expression converting apparatus according to claim 4, wherein when the degree of similarity is high as the result of the comparison, said converting



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means outputs the selected expression after removing a part of the selected expression into which a key word is converted, is removed from the selected expression, said key word belonging to the previously identified key word combination of the selected sentence that does not coincide and not being included in the with the combined key word combination that coincides and not being included in the previously identified key word combination of the selected sentence that coincide with the combined key word combination.

- 6. (Original) An expression converting apparatus according to claim 4, wherein said expression into which the sentence is converted comprises only key words or words equivalent to the key words.
 - 7. (Currently Amended) An expression converting apparatus comprising:

associating means of, by use of classing information in which key words are previously classed based on predetermined properties and each class is provided with a name, for each sentence in a corpus, selecting key words from the sentence, identifying a combination of classes that are in a co-occurrence relation from among a predetermined number of combinations of classes among classes to which the selected key words belong, and previously associating the identified class combination and an expression into which the sentence from which the key words are selected is converted; and

converting means of selecting predetermined key words from an input sentence, combining classes to which the selected key words belong, comparing the class combinations and the previously identified class combination of each sentence, selecting one or more than one sentences that coincide or have a high degree of similarity as a result of the comparison, and outputting expressions into which the selected sentences are converted.

wherein the predetermined key words of each sentence in the corpus are stored,

from the stored predetermined key words of each sentence in the corpus, predetermined class combinations of key words are selected as having a dependency relationship and stored,



<u>and</u>

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the predetermined class combinations of key words are individually selected for each sentence from the stored predetermined key words of the sentence.

8. (Currently Amended) An expression converting apparatus comprising:

associating means of, for each sentence in a corpus, selecting key words from the sentence, identifying a combination of key words that are in a co-occurrence relation from among a predetermined number of combinations of key words among the selected key words, and previously associating the identified key word combination and an expression into which the sentence from which the key words are selected is converted, and

by use of classing information in which key words are previously classed based on predetermined properties and each class is provided with a name, associating the identified key word combination with a class combination to thereby identify a class combination of the sentence; and

converting means of selecting predetermined key words from an input sentence, combining classes to which the selected key words belong, comparing the class combinations and the previously identified class combination of each sentence, selecting one or more than one sentences that coincide or have a high degree of similarity as a result of the comparison, and outputting expressions into which the selected sentences are converted, and

the predetermined key words of each sentence in the corpus are stored,

from the stored predetermined key words of each sentence in the corpus, predetermined combinations of key words are selected as having a dependency relationship and stored, and the predetermined combinations of key words are individually selected for each sentence from the stored predetermined key words of the sentence.

9. (Currently Amended) An expression converting apparatus according to claim 7 or 8, wherein when the degree of similarity is high as the result of the comparison, said converting



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means outputs the selected expression after removing a part of the selected expression into which a class is converted is removed from the selected expression, said class belonging to the previously identified class combination of the selected sentence that does not coincide with the combined class combination and not being included in the previously identified class combination.

- 10. (Original) An expression converting apparatus according to claim 7 or 8, wherein said expression into which the sentence is converted comprises only class.
- 11. (Original) A program for causing a computer to function as all or part of the following means of the expression converting apparatus according to claim 4:

the associating means of, for each sentence in a corpus, selecting key words from the sentence, identifying a combination of key words that are in a co-occurrence relation from among a predetermined number of combinations of key words among the selected key words, and previously associating the identified key word combination and an expression into which the sentence from which the key words are selected is converted; and

the converting means of selecting predetermined key words from an input sentence, combining the selected key words, comparing the key word combinations and the previously identified key word combination of each sentence, selecting one or more than one sentences that coincide or have a high degree of similarity as a result of the comparison, and outputting expressions into which the selected sentences are converted.

12. (Original) A program for causing a computer to function as all or part of the following means of the expression converting apparatus according to claim 7:

the associating means of, by use of the classing information in which key words are previously classed based on predetermined properties and each class is provided with a name, for each sentence in a corpus, selecting key words from the sentence, identifying a combination of classes that are in a co-occurrence relation from among a predetermined number of combinations of classes among classes to which the selected key words belong, and previously



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associating the identified class combination and an expression into which the sentence from which the key words are selected is converted; and

the converting means of selecting predetermined key words from an input sentence, combining classes to which the selected key words belong, comparing the class combinations and the previously identified class combination of each sentence, selecting one or more than one sentences that coincide or have a high degree of similarity as a result of the comparison, and outputting expressions into which the selected sentences are converted.

13. (Original) A program for causing a computer to function as all or part of the following means of the expression converting apparatus according to claim 8:

the associating means of, for each sentence in a corpus, selecting key words from the sentence, identifying a combination of key words that are in a co-occurrence relation from among a predetermined number of combinations of key words among the selected key words, and previously associating the identified key word combination and an expression into which the sentence from which the key words are selected is converted, and

by use of the classing information in which key words are previously classed based on predetermined properties and each class is provided with a name, associating the identified key word combination with a class combination to thereby identify a class combination of the sentence; and

the converting means of selecting predetermined key words from an input sentence, combining classes to which the selected key words belong, comparing the class combinations and the previously identified class combination of each sentence, selecting one or more than one sentences that coincide or have a high degree of similarity as a result of the comparison, and outputting expressions into which the selected sentences are converted.

- 14. (Currently Amended) A method of converting a sentence of an original language into a sentence of a target language, comprising the steps of:
 - (a) storing bilingual sentences of the original and target languages in a database;

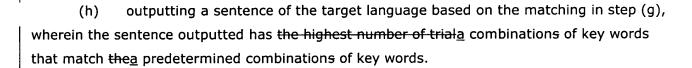


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(b) storing <u>predetermined</u> key words of each bilingual sentence stored in step (a) in the database;

- (c) <u>identifying storing</u> predetermined combinations of key words stored in step (b) as having a dependency relationship;
 - (d) inputting a sentence of an original language;
 - (e) extracting a plurality of key words from the sentence inputted in step (d);
- (f) forming trial-combinations of key words in accordance with step (b) from the key words extracted in step (e);
- (g) matching the trial each combinations of key words formed in step (f) with the predetermined combinations of key words stored in step ($\frac{bc}{c}$); and



- 15. (Previously Presented) The method of claim 14 wherein step (c) includes identifying the predetermined combinations of key words as having the dependency relationship for forming expressions.
- 16. (New) A method of converting a sentence of an original language into a sentence of a target language according to claim 14,

wherein step (c) stores predetermined combinations of key words stored in step (b) as having a dependency relationship for each sentence itself of the original language.

